REMARKS

Claims 1-43 are pending. Claims 1-8 and 16-19 stand withdrawn from consideration for being drawn to a non-elected invention Claims 9-15 and 20-42 are under examination. Claim 9 has been amended to delete the phrase "or a modification of the encoding nucleic acid sequence." No new matter has been added by the amendment and entry is respectfully requested.

Rejections Under 35 U.S.C. § 101 and § 112, First Paragraph

The rejection of claims 9-15 and 20-42 under 35 U.S.C. § 101 and under § 112, first paragraph, as allegedly lacking utility are respectfully traversed. Applicant respectfully maintains, for the reasons of record, that the claimed nucleic acids have a specific, substantial and credible utility.

Applicant respectfully maintains that the specification teaches a substantial and specific utility and is clearly distinguishable from the EST's at issue in *In re Fischer*, Case No. 04-1465 (Fed. Cir. Sept. 9, 2005). *In re Fisher* makes it clear that the threshold for utility of a DNA sequence is the **identification of a function for the underlying protein-encoding genes.** Analysis of the Nope sequence revealed that the protein encoded by the Nope nucleic acid sequence contains four immunoglobulin domains and five fibronectin-type domains, has structural similarity to DCC, Punc and NCAM, and most closely resembles cell adhesion molecules (page 46, lines 8-17). The specification further teaches the function of these structurally related proteins as axonal guidance receptors (page 49, line 22, to page 50, line 7). The specification also teaches the developmental expression of Nope, including its expression in cells of the nervous system (Example II, pages 46-48, in particular page 47, line 27, to page 48, line 16). The specification clearly provides an explicit teaching of a specific, substantial and credible utility of the Nope polynucleotide in that it encodes a protein expressed in the nervous system and that functions as an axonal guidance receptor.

With regard to the claimed Nope encoding nucleic acids, the specification teaches that the nucleic acid encodes a polypeptide having four immunoglobulin domains and five fibronectin-type domains, both of which are well characterized structural domains (page 46, lines 8-17). In

addition, the specification teaches that Nope is related to axonal guidance receptors (page 49, line 22, to page 50, line 3). Furthermore, the specification teaches that Nope is expressed in the nervous system, consistent with its role in axonal guidance. Therefore, the claimed nucleic acids encoding Nope are correlated in the specification with well known structural motifs, proteins with known function, and tissue expression consistent with that function.

Applicant respectfully maintains that, at least for the reasons described above and those already made of record, the claimed nucleic acids have a specific and substantial utility. Applicant respectfully submits that, based on the teachings in the specification and what was well known to those skilled in the art, one of ordinary skill in the art would have understood that the claimed Nope encoding nucleic acid molecules have a specific, substantial and credible utility. Accordingly, Applicant respectfully requests that the utility rejection under 35 U.S.C. § 101 and 112 be withdrawn.

Rejection Under 35 U.S.C. § 112, First Paragraph

The rejection of claims 9, 10 and 14 under 35 U.S.C. § 112, first paragraph, as allegedly lacking written description is respectfully traversed. This rejection has been rendered moot by the amendment to claim 9. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

CONCLUSION

In light of the remarks herein, Applicant submits that the claims are now in condition for allowance and respectfully requests a notice to this effect. The Examiner is invited to call the undersigned agent if there are any questions.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 502624 and please credit any excess fees to such deposit account.

Respectfully submitted,

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